

# Google Earth Exercise: Weathering and Erosion

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Directions:** In this activity, student will use the internet and Google Earth Pro to discover general information about the various features on Earth that were created through weathering and erosion. Students will create a presentation in PowerPoint of their research and submit it to the First Class geology workgroup. Students should create one slide for each location. On each slide students should include 1) an overhead screenshot from Google Earth, 2) a picture of each feature listed, and 3) bulleted information that answers the questions for each formation.

**Arches** are natural structures that are formed from weathering and erosions. Famous examples of arches are Delicate Arch in Arches National Park, Utah and the sea arches found at Etretat on the Northern Coast of France, or the Es Pontas arch off the coast of Mallorca, Spain. Use Google Earth and the Internet to find these structures and answer the following questions:

1. What are the geographic coordinates of each location?
2. What is the distance from the island to the Es Pontas Arch? Could you swim it?
3. What is the composition of the rock at one formation?
4. What is the geological history of one of the formations?

**Hoodoos** are tall thin spires of rock that protrude from the bottom of arid basins and badlands. A famous example of hoodoos is the Hoodoos Amphitheater at Bryce Canyon National Park, Utah. Use Google Earth and the Internet to find these structures and answer the following questions:

1. What is the height of these structures?
2. What is the geological history of these structures

**Badlands** are a type of arid terrain where softer sedimentary rocks and clay-rich soils have been extensively eroded by wind and water. Badlands National Park in South Dakota and the Putangirua Pinnacles in New Zealand are world-class examples. Use Google Earth and the Internet to find these structures and answer the following questions:

1. What is the common geologic structure associated with this landscape?
2. Use the measuring tool to determine the area of these structures, how do they compare?
3. What is the geological history of each formation?

**Canyons** are carved from the landscape by a river. Most canyons were formed by a process of long-time erosion from a plateau level. A famous example of a canyon is the Grand Canyon in Arizona and Kings Canyon in the Northern Territory of Australia. Use Google Earth and the Internet to find these structures and answer the following questions:

1. How large are these canyons?
2. What is their greatest depth?
3. What is the geologic history of each canyon?

**Inselbergs** are isolated hills that rise from the ground. They are typically igneous formations that have been uncovered through the erosion of the overburden. Two famous Inselbergs are Stone Mountain in Georgia and Ayers Rock in Australia. Use Google Earth and the Internet to find these structures and answer the following questions:

1. What is the highest elevation of each?
2. What is the composition of the rock?

**Mesas** are elevated areas of land with a flat top and sides that are usually steep cliffs. Beautiful examples of mesa exist in the Painted Desert, Arizona. Use Google Earth and the Internet to find these structures and answer the following questions:

1. What is one of the largest mesas in the area?
2. What evidence do you have from Google Earth that might give you a clue as how the area got its name?
3. How could the measuring tools in Google Earth be use to calculate the volume of the mesa?

4. What is the difference between a mesa and a butte?
5. What do you think caused these geologic features to occur in Arizona?